

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:) Conf. No.: 5876
SchieSSL)
Application No.: 10/589,079) Group Art Unit: 1793
Filed: August 11, 2006) Examiner: VELASQUEZ
For: Method for producing a component)
by reshaping a plate, and device)
for carrying out said method)

REPLY BRIEF

Honorable Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

This is a Reply Brief to the Examiner's Answer of December 3, 2010. The Director is hereby authorized to charge any deficiency in fees filed, asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account 14-1437. Please credit any excess fees to such account.

Status of Claims

Claims 26 – 44 are pending in the application and are being appealed.
Claims 1 – 25 are cancelled.

Grounds of Rejection to be Reviewed on Appeal

- I. The Office action erred by rejecting claim 38, citing 35 U.S.C. §112, first paragraph.
- II. The Office action erred by rejecting claims 26 – 29 and 32 – 42, citing 35 U.S.C. §103(a), U.S. 3,337,376 to Grange (hereinafter, "Grange '376"), Schmoeckel, "Metal Forming (Warm): Comparison with Hot and Cold Forming," Vol. 6, Encyclopedia of Materials (hereinafter, "Schmoeckel"), US 3,057,050 to Hodge et al. (hereinafter, "Hodge"), and optionally US 3,891,474 to Grange (hereinafter, "Grange '474").
- III. The Office action erred by rejecting claims 30 and 44, citing 35 U.S.C. §103(a), Grange '376, Schmoeckel, Hodge, and optionally Grange '474 and Hassell et al., "Induction Heat Treating of Steel," Vol. 4, ASM Handbooks (hereinafter, "Hassell").
- IV. The Office action erred by rejecting claim 31, citing 35 U.S.C. §103(a), Grange '376, Schmoeckel, Hodge, and optionally Grange '474, and US 2002/0069506 to Brodt et al. (hereinafter, "Brodt").
- V. The Office action erred by rejecting claim 43, citing 35 U.S.C. §103(a), Grange '376, Schmoeckel, Hodge, and optionally Grange '474, and Smith "Continuous Furnaces," Vol. 4, ASM Handbook.

Arguments

The rejection of claim 38 under 35 U.S.C. §112, first paragraph should be withdrawn. Claim 38 is directed to the method according to claim 35, wherein the second manufacturing process is continuous. The Examiner's Answer asserts page 3 of the specification teaches the process of sheet bar forming may be decoupled, but asserts that the second portion of the manufacturing process is not explicitly said to be continuous. This assertion is erroneous, because page 3 of the specification explains the invention can involve decoupling the sequences of a continuous process. Therefore, the specification discloses that the second manufacturing process as currently claimed can be continuous. The Examiner's Answer provides no rationale supporting the implicit assertion that once decoupled the second manufacturing process would cease to be continuous.

The present claims relate to a method of forming a component from an aluminum coated steel blank. Grange '376 does not employ an aluminum coated steel blank. Grange '376 relates to a method of hardening hypereutectoid steels. Yet, the obviousness rejections all rely on Grange '376 to provide teachings about how to process an aluminum coated steel blank. Grange '376 cannot provide such teachings.

None of the references cited describe a method of forming a component comprising heating an aluminum coated steel blank. For example, Grange '474 relates to a heat treating method for improving the mechanical properties of case carburized steel articles. Therefore, just like Grange '376, the teachings of Grange '474 cannot be applied to an aluminum coated steel blank. Any attempt to do so is based solely in hindsight. Using the present invention as a guide to pick and choose process steps from the prior art without regard to how and why the prior art employs those steps is insufficient to establish obviousness.

Grange '474, however, is useful to demonstrate the difficulties associated with treating steel articles comprising a case/coating and a core. In the context of case carburized steel articles, Grange '474, describes, "the necessity for

compromising between maximum properties for both case and core.¹ More specifically, Grange '474 explains,

After the article is carburized, various heat treatments are then employed to further harden or toughen the case only, the core only or both the case and core. Since the carburized article is in reality a duplex alloy, i.e., a high carbon case and a low carbon core, it is often very difficult to simultaneously enhance the mechanical properties of both alloy portions by the same set of heat treatments. Thus, for example, a direct quenching procedure which would yield the highest attainable core strength will yield a case with low indentation hardness and unsatisfactory distortion. Similarly, a reheating treatment which may be employed to produce high surface hardness, would yield a core which is soft, but nevertheless exhibits less than maximum attainable toughness.²

The Examiner's Answer ignores all of these difficulties, and instead pretends Grange '376's method of hardening hypereutectoid steels is relevant to a method for processing an aluminum coated steel blank. It is not.

The argument that Grange '376 is being "attacked individually" is erroneous. The Examiner uses Grange '376 for a teaching that it cannot provide. Hodge's alleged disclosure of benefits of coating steel with aluminum does not make Grange '376's teachings about processing hypereutectoid steels applicable to aluminum coated steel blanks.

Finally, the present claims require storing a heat treated blank at room temperature. Grange '376 does not disclose storing at room temperature. To the contrary, Grange '376 makes clear that when room temperature is reached, the steel is reheated rapidly to minimize microcracks. Storing at room temperature is not the same as reaching room temperature and immediately and rapidly reheating. Claim 27 further distinguishes by requiring the interval of the initial heating of said blank is in the range of 9 to 30 minutes. Claim 34 further

¹ Column 1, lines 38 – 39 of Grange '474.

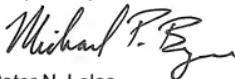
² Column 1, lines 20 – 35 of Grange '474.

distinguishes by requiring a step of transporting the heat treated blank to a storage area.

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